

**Notice of Allowability**

Application No.	Applicant(s)
10/692,522	WESTFALL ET AL.
Examiner	Art Unit
Jessica T. Stultz	2873

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS. This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1.  This communication is responsive to RCE, amendment and IDS filed September 7, 2005.

2.  The allowed claim(s) is/are 1-34,39-58,61-66 and 70-78.

3.  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)  All    b)  Some\*    c)  None    of the:

1.  Certified copies of the priority documents have been received.

2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.

3.  Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4.  A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5.  CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.

(a)  including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached  
1)  hereto or 2)  to Paper No./Mail Date \_\_\_\_\_.

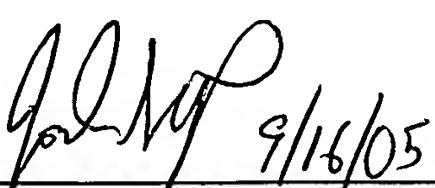
(b)  including changes required by the attached Examiner's Amendment / Comment or in the Office action of  
Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

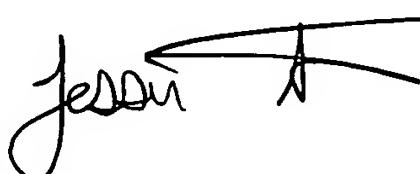
6.  DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1.  Notice of References Cited (PTO-892)
2.  Notice of Draftsperson's Patent Drawing Review ( PTO-948)
3.  Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date 0905
4.  Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5.  Notice of Informal Patent Application (PTO-152)
6.  Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_.
7.  Examiner's Amendment/Comment
8.  Examiner's Statement of Reasons for Allowance
9.  Other \_\_\_\_\_.



9/16/05



Allowed Claims: 1-34, 39-58, 61-66, and 70-78

### **EXAMINER'S AMENDMENT**

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

1. Cancel non-elected claims 35-38, 59-60, 67-69, and 79-100.

#### *Examiner's Comments*

For applicant's information, this application is in condition for allowance except for the presence of claims 35-38, 59-60, 67-69, and 79-100 non-elected without traverse. Accordingly, claims 35-38, 59-60, 67-69, and 79-100 have been cancelled.

#### *Reasons for Allowance*

The following is an examiner's statement of reasons for allowance: none of the prior art alone or in combination disclose or teach of the claimed combination of limitations to warrant a rejection under 35 USC 102 or 103.

Specifically in reference to independent claims 1 and 17, none of the prior art alone or in combination disclose or teach of a method for modulating a refractive index of an ion insertion layer in an optical device, wherein the ion insertion layer has a dielectric constant with a real and imaginary portion that change, specifically wherein the absolute difference between the change of the imaginary portion is less than the absolute change of the real portion.

Specifically in reference to independent claims 20 and 70, none of the prior art alone or in combination disclose or teach of a method for modulating a refractive index of an ion insertion layer in an optical device, wherein refractive index has a real and imaginary portion that change, specifically wherein the absolute difference between the difference in the real portion is greater than 0.1 and the difference in the imaginary portion is less than 0.2.

Specifically in reference to independent claim 39, none of the prior art alone or in combination disclose or teach of an iono-refractive device comprising an ion conduction material and an ion insertion material, wherein the ion insertion material has a refractive index with a real and imaginary portion that change, specifically wherein the absolute difference between the change of the imaginary portion is less than the absolute change of the real portion.

Specifically in reference to independent claim 49, none of the prior art alone or in combination disclose or teach of an iono-refractive device comprising an ion conduction material and an ion insertion material, wherein the ion insertion material has a refractive index with a real and imaginary portion that change, specifically, specifically wherein the absolute difference between the difference in the real portion is greater than 0.1 and the difference in the imaginary portion is less than 0.2.

Specifically in reference to independent claim 61, none of the prior art alone or in combination disclose or teach of an apparatus for modulating a refractive index of an ion insertion layer in an optical device, wherein the ion insertion layer has a dielectric constant with a real and imaginary portion that change, specifically wherein the absolute difference between the change of the imaginary portion is less than the absolute change of the real portion.

Specifically in reference to independent claim 64, none of the prior art alone or in combination disclose or teach of an apparatus for modulating a refractive index of an ion insertion layer in an optical device, wherein the refractive index has a real and imaginary portion that change, specifically wherein the absolute difference between the difference in the real portion is greater than 0.1 and the difference in the imaginary portion is less than 0.2.

Specifically in reference to independent claims 73, none of the prior art alone or in combination disclose or teach of a method for modulating a refractive index of an ion insertion layer in an optical device, wherein refractive index has a real and imaginary portion that change, specifically wherein the absolute difference between the difference in the real portion is greater than 0.1 and the absolute difference between the difference in the imaginary portion is substantially diminished in response to changing the lattice structure.

Specifically in reference to independent claims 76, none of the prior art alone or in combination disclose or teach of a method for modulating a refractive index of an ion insertion layer in an optical device, wherein refractive index has a real and imaginary portion that change, specifically wherein the absolute difference between the difference in the real portion is greater than 0.1 and the absolute difference between the difference in the imaginary portion is substantially diminished in response to annealing the ion insertion layer.

### *Conclusion*

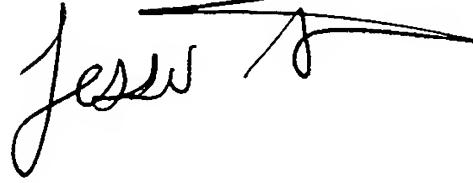
Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jessica T. Stultz whose telephone number is (571) 272-2339. The examiner can normally be reached on M-F 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Epps can be reached on 571-272-2328. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jessica Stultz  
Patent Examiner  
AU 2873  
September 15, 2005

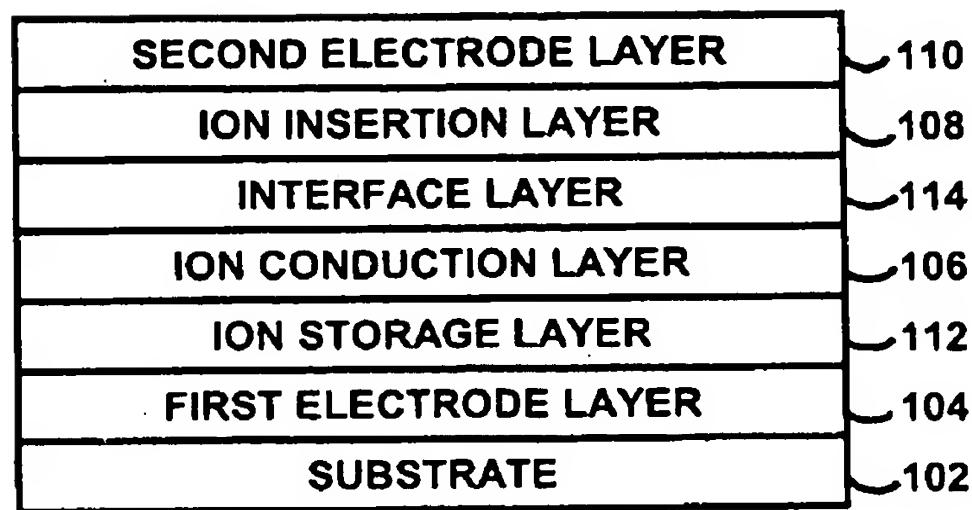


JORDAN SCHWARTZ  
PRIMARY EXAMINER

Applicants : Raymond T. Westfall and Howard P. Groger Docket No.: EES-2  
Application No.: Not yet assigned Confirmation No.: Not yet assigned  
Filed : Concurrently Herewith  
For : APPARATUS AND METHODS FOR MODULATING REFRACTIVE INDEX Express Mail No.  
Agent : Philip R. Poh, Reg. No. 51,176, Tel: (212) 596-9000 Sheet 1 of 3 EV 132187976 US

Approved  
by  
Examiner  
JF  
9/15/05

100



**FIG. 1**